

In the Specification:

Please amend the specification in the paragraph at page 2, starting at line 12 as follows:

In brief, a method, apparatus and computer program product are provided for providing location-specific responses in an automated voice response system. A microphone signal is received from each of a plurality of microphones. The microphones are located within a defined environment. A spoken command is identified utilizing ~~voice~~ speech recognition responsive to the received microphone signals. A sound origin or sound location vector is identified responsive to each identified spoken command from respective ones of the plurality of microphones. A response command is provided based upon the identified sound location vector.

Please amend the specification in the paragraph at page 3, starting at line 31 as follows:

In accordance with features of the invention, the automated voice response system 100 processes a sound input from the microphones 1-N, 114 performing ~~voice~~ speech recognition to identify spoken commands and signal analysis to identify the location of a sound's origin within environment 114. The identified physical location of the person uttering a spoken command is used as a discriminating criterion by the automated voice response system 100 to select one of the stored automated response commands 124 for controlling different devices 1-3, 104.

Please amend the specification in the paragraph at page 4, starting at line 12 as follows:

Referring now to FIG. 2, the automated voice response system 100 including user interface 200 is shown in more detail. User interface 200 includes a respective analog-to-digital converter (ADC) 204 coupled to each of the microphones 1-N, 114. ADC 204 receives and digitizes an analog audio signal from its associated microphone 114 and applies the digitized audio signal to a clock adder 206. A

synchronized time signal is added by the clock adder 206 to the digitized audio signal and then applied to both a respective ~~voice~~ speech recognition unit (~~VRU~~) (SRU) 208 and a respective channel input of a digital analysis unit 300. Digital analysis unit 300 includes a respective digital buffer 210 and a signal analysis buffer 212 for each respective channel input 1-N corresponding to digitized, clock added signals for the microphones 1-N, 114. A command status word (CSW) register 216 is connected to each ~~VRU~~ SRU 208 and to the CPU 102. When a particular ~~VRU~~ SRU 208 identifies a spoken command, a bit corresponding to the particular ~~VRU~~ SRU 208 is set in the CSW 216. CPU 102 polls the CSW 216. When the CPU 102 detects that a bit has been set in the CSW 216, CPU 102 interrogates the corresponding ~~VRU~~ SRU 208 for a command ID (CID), a start time of the command T_0 , and a length of the command as a measure of time T_c . Upon receiving the command information, CPU 102 signals the digital analysis unit 300 via a snap block 218 and an analyze block 220 to analyze the identified spoken command signal. Digital analysis unit 300 returns a location vector to the CPU 102 indicated at a line labeled LOCATION. User interface 200 includes a respective digital-to-analog converter (DAC) 222 coupled between CPU 102 and each of the different devices 104 (one shown in FIG. 2). Responsive to the location signal provided by the digital analysis unit 300, CPU 102 then applies a location-specific response for selectively controlling at least one of a plurality of different devices 1-3, 104.

Please amend the specification in the paragraph at page 5, starting at line 20 as follows:

Referring now to FIG. 5, there are shown exemplary sequential steps for implementing location-specific responses in the automated voice response system 100 in accordance with the preferred embodiment. The sequential steps begin when a command is spoken as indicated in a block 500 and sound enters the plurality of microphones 1-N, 114 as indicated in a block 502. The microphone signal is digitized and a clock signal is added to the digitized microphone signal by a respective ADC 204 and the clock adder 206 as indicated in a block 504. A spoken command is recognized by one or more ~~VRU~~ SRU 208 as indicated in a block 506. The spoken command identified at block 506 is limited to commands that start with a given phrase or prefix

word, such as "computer". Also, the spoken command identified at block 506 can be limited to commands spoken by a particular person. ~~VRU~~ SRU 208 advantageously can be adapted to identify a particular person before certain spoken commands are processed, for example, in order to implement parental control of a particular device 104.

Please amend the specification in the paragraph at page 6, starting at line 1 as follows:

Each ~~VRU~~ SRU 208 recognizing the spoken command at block 506, (VRUn), stores the command start time T_0 , and the command length T_c for the identified command and sets a bit in the command status word (CSW) 216 as indicated in a block 508. CPU 102 detects the bit in the command status word (CSW) 216 and retrieves the command start time T_0 , and the command length T_c for the identified command from the respective ~~VRU~~ SRU as indicated in a block 510. CPU 102 passes the ~~VRU~~ SRU channel number n , the command start time T_0 , and the command length T_c for the identified spoken command to the digital analysis unit (DAU) 300 as indicated in a block 512. DAU 300 analyzes the sound for each identified spoken command, taking key information from each ~~VRU~~ SRU channel number n , and determines a sound location vector as indicated in a block 514.

Please amend the specification in the paragraph at page 6, starting at line 25 as follows:

It should be understood that many variations of the exemplary steps performed by the automated voice response system 100 can be provided. One variation would be to only perform the location analyses when the identified spoken command indicates the location analyses is necessary. For example, the spoken command, "computer, lock up the house" would have no locational component, while the spoken command, "computer, lock this door" would have a locational component. Another variation would screen commands that originated from certain fixed locations, such as stereo speakers or intercoms, so that the location analyses would not be performed. Also the automated voice response system 100 can be arranged to

process the microphone signal from one ~~VRU~~ SRU 208, which was passed the loudest signal from the array of microphones inputs.

Please amend the specification in the paragraph at page 13, starting at line 4 as follows:

A method, apparatus and computer program product provide location-specific responses in an automated voice response system. A microphone signal is received from each of a plurality of microphones. The microphones are located within a defined environment. A spoken command is identified utilizing ~~voice~~ speech recognition responsive to the received microphone signals. A sound origin or sound location vector is identified responsive to each identified spoken command from respective ones of the plurality of microphones. A response command is provided based upon the identified sound location vector.